Format No: CP/TF/01

## TEST REPORT OF CEMENT CONCRETE CUBES

**Lab ID** : **CP-2022-01-19-28** **Date: 02/08/2021**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 28-07-21

**Customer ID** : PCC

**Sample Type /Size** : 150X150X150 mm

**Sample grade/Age** : M15 / 7 Days Compressive Strength

**Reference to BIS codes** : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

**Date of test** : 02/08/2021

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PCC | M15 | 26/07/2021 | 02/08/2021 | 149.33 X 151.26 X 151.67 | 22587 | 8.258 | 286.1 | 12.7 | 12.4 |
| 2 | PCC | M15 | 26/07/2021 | 02/08/2021 | 149.59 X 150.62 X 149.87 | 22531 | 8.154 | 275.2 | 12.2 | |
| 3 | PCC | M15 | 26/07/2021 | 02/08/2021 | 151.23 X 151.13 X 151.28 | 22855 | 8.532 | 278.9 | 12.2 | |

* The results obtained are satisfactory as per standard requirements.

**Note:**

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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**R RUDRAPRASAD**
Authorized Signatory
**Technical Manager**



****End of Report****

Format No: CP/TF/01

# TEST REPORT OF CEMENT CONCRETE CUBES

**Lab ID** : **CP-2022-01-19-28** **Date: 23/08/2021**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 28-07-21

**Customer ID** : PCC

**Sample Type /Size** : 150X150X150 mm

**Sample grade/Age** : M15 / 28 Days Compressive Strength

**Reference to BIS codes** : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

**Date of test** : 23/08/2021

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PCC | M15 | 26/07/2021 | 23/08/2021 | 150.48 X 149.61 X 149.57 | 22513 | 9.012 | 403.7 | 17.9 | 17.6 |
| 2 | PCC | M15 | 26/07/2021 | 23/08/2021 | 150.09 X 150.35 X 151.68 | 22567 | 8.990 | 391.8 | 17.4 | |
| 3 | PCC | M15 | 26/07/2021 | 23/08/2021 | 151.18 X 150.53 X 149.31 | 22757 | 8.983 | 400.8 | 17.6 | |

* The results obtained are satisfactory as per standard requirements.

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Authorized Signatory
**Technical Manager**


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Format No: CP/TF/01

# TEST REPORT OF CEMENT CONCRETE CUBES

**Date: 10/08/2021**

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2022-01-19-28** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Address** | : | Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11. |
| **Agency** | : | H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97 |
| **Customer's Reference** | : | BBMP/EE/BTP/WO/247/2016-17 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 05-08-21 |
| **Customer ID** | : | PCC |
| **Sample Type /Size** | : | 150X150X150 mm |
| **Sample grade/Age** | : | M20 / 7 Days Compressive Strength |
| **Reference to BIS codes** | : | IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5 |
| **Date of test** | : | 10/08/2021 |

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PCC | M20 | 03/08/2021 | 10/08/2021 | 149.77 X 149.72 X 151.96 | 22425 | 8.246 | 417.6 | 18.6 | 18.6 |
| 2 | PCC | M20 | 03/08/2021 | 10/08/2021 | 151.96 X 151.89 X 149.56 | 23082 | 8.716 | 429.0 | 18.6 | |
| 3 | PCC | M20 | 03/08/2021 | 10/08/2021 | 149.10 X 151.95 X 149.03 | 22656 | 8.515 | 422.6 | 18.7 | |

* The results obtained are satisfactory as per standard requirements.

**Note:**

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CIVIL Pro Sl. ..... Date..... BANGALORE

**FOR CIVIL Pro.**

**R RUDRAPRASAD**
Authorized Signatory
**Technical Manager**

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****End of Report****

Format No: CP/TF/01

# TEST REPORT OF CEMENT CONCRETE CUBES

**Lab ID** : **CP-2022-01-19-28** **Date: 31/08/2021**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 05-08-21

**Customer ID** : PCC

**Sample Type /Size** : 150X150X150 mm

**Sample grade/Age** : M20 / 28 Days Compressive Strength

**Reference to BIS codes** : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

**Date of test** : 31/08/2021

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PCC | M20 | 03/08/2021 | 31/08/2021 | 151.65 X 149.20 X 150.09 | 22626 | 8.831 | 530.7 | 23.5 | 23.1 |
| 2 | PCC | M20 | 03/08/2021 | 31/08/2021 | 151.57 X 149.17 X 149.48 | 22610 | 8.759 | 511.6 | 22.6 | |
| 3 | PCC | M20 | 03/08/2021 | 31/08/2021 | 150.12 X 151.61 X 149.08 | 22760 | 8.641 | 530.7 | 23.3 | |

* The results obtained are satisfactory as per standard requirements.

**Note:**

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Authorized Signatory
**Technical Manager**


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# TEST RESULTS ON STRUCTURAL STEEL

**Lab ID** : **CP-2022-01-19-28** **Date: 20-07-21**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Sourse of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 19-07-21

**Type/ Description of Sample*** : RHS 100X40X3.2Th

**Reference to BIS codes** : IS 2062: 2011, IS:1608-2005(RA 2011), IS 1599-2012.

**Date of testing** : 19-07-21

| SL.NO | Description | Result | Required as per as IS Code 2062: 2011 | Remarks |
|---|---|---|---|---|
| 1 | Weight/Meter | 6.73 Kg /m | – | |
| 2 | Yeild Stress | 275 $N/mm^2$ | 240 $N/mm^2$ | |
| 3 | Tensile Strength | 482 $N/mm^2$ | 410 $N/mm^2$ | |
| 4 | Elongation Percentage | 19% | Min 15% | |
| 5 | Bend Test | Satisfactory | – | |

* The results obtained are satisfactory as per standard requirements.

**Note:**
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**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**

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M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com
HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
WATER TESTING | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES

# TEST RESULTS ON STRUCTURAL STEEL

**Lab ID** : **CP-2022-01-19-28** **Date: 20-07-21**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Sourse of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 19-07-21

**Type/ Description of Sample*** : RHS 40X20X2.9Th

**Reference to BIS codes** : IS 2062: 2011, IS:1608-2005(RA 2011), IS 1599-2012.

**Date of testing** : 19-07-21

| SL.NO | Description | Result | Required as per as IS Code 2062: 2011 | Remarks |
|---|---|---|---|---|
| 1 | Weight/Meter | 2.48 Kg /m | – | |
| 2 | Yeild Stress | 262N/mm$^2$ | 240 N/mm$^2$ | |
| 3 | Tensile Strength | 468 N/mm$^2$ | 410 N/mm$^2$ | |
| 4 | Elongation Percentage | 19% | Min 15% | |
| 5 | Bend Test | Satisfactory | – | |

* The results obtained are satisfactory as per standard requirements.

**Note:**
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Authorized Signatory
Quality Manager

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****End of Report****

# TEST RESULTS ON STRUCTURAL STEEL

**Lab ID** : **CP-2022-01-19-28** **Date: 20-07-21**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Sourse of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 19-07-21

**Type/ Description of Sample*** : ISLB 100*50 @ 8.1 Kg/m

**Reference to BIS codes** : IS 2062: 2011, IS:1608-2005(RA 2011), IS 1599-2012.

**Date of testing** : 19-07-21

| SL.NO | Description | Result | Required as per as IS Code 2062: 2011 | Remarks |
|---|---|---|---|---|
| 1 | Weight/Meter | 8.13 Kg /m | – | |
| 2 | Yeild Stress | 272 $N/mm^2$ | 240 $N/mm^2$ | |
| 3 | Tensile Strength | 462 $N/mm^2$ | 410 $N/mm^2$ | |
| 4 | Elongation Percentage | 18% | Min 15% | |
| 5 | Bend Test | Satisfactory | – | |

* The results obtained are satisfactory as per standard requirements.

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**Quality Manager**

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## TEST RESULTES FOR MS BLOCK PIPE

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2022-01-19-28** **Date: 21-07-21** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Address** | : | Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Agency** | : | Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11. |
| **Project Name** | : | H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97 |
| **Customer's Reference** | : | BBMP/EE/BTP/WO/247/2016-17 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 19-07-21 |
| **Type of Sample** | : | M.S Block Pipe |
| **Reference to BIS codes** | : | IS:1608-2005(RA 2011), IS 1599-2012. |
| **Date of test** | : | 19-07-21 |

**TESTS RESULTS FOR MS BLOCK PIPE 38MM DIA, 14 GAUGE**

| Sl. No | Description | Result | Required as per as IS Code 2062: 2011 | Remarks |
|---|---|---|---|---|
| 1 | Yeild Stress (N/mm2) | 285 | 250N/mm$^2$ | Satisfactory |
| 2 | Tensile Strength (N/mm2) | 490 | 410N/mm$^2$ | Satisfactory |
| 3 | Elongation Percentage (%) | 23.5 | Min 23% | Satisfactory |

* The results obtained are satisfactory as per standard requirements.

**Note:**
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**R RUDRAPRASAD**
Authorized Signatory
**Technical Manager**


****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com
HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
WATER TESTING | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES

# TEST RESULTES ON STRUCTURAL STEEL

**Lab ID** : **CP-2022-01-19-28** **Date: 20-07-21**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Sourse of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 19-07-21

**Type/ Description of Sample*** : Column - ISLB 100*50

**Reference to BIS codes** : IS 2062: 2011, IS:1608-2005(RA 2011), IS 1599-2012.

**Date of testing** : 19-07-21

| SL.NO | Description | Result | Required as per as IS Code 2062: 2011 | Remarks |
|---|---|---|---|---|
| 1 | Weight/Meter | 8.1 Kg /m | – | |
| 2 | Yeild Stress | 272 $N/mm^2$ | 240 $N/mm^2$ | |
| 3 | Tensile Strength | 462 $N/mm^2$ | 410 $N/mm^2$ | |
| 4 | Elongation Percentage | 18% | Min 15% | |
| 5 | Bend Test | Satisfactory | – | |

* The results obtained are satisfactory as per standard requirements.

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Authorized Signatory
**Technical Manager**

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# QC ABSTRACT

**NAME OF WORK:** Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

| SL NO | Item Of Work | Name of Test | Frequency of Test/Quantity | Executed Quantity | Number of Tests Required | Number of Tests Conducted |
|---|---|---|---|---|---|---|
| | | **Materials** | | | | |
| 1 | Cement | Fineness by dry sieving | One Test | | 1 | 1 |
| | | Finess by Air permeablity method | One Test | | 1 | 1 |
| | | Density | One Test | | 1 | 1 |
| | | Standard Consistency | One Test | | 1 | 1 |
| | | Initial Setting time | One Test | | 1 | 1 |
| | | Final Setting time | One Test | | 1 | 1 |
| | | Soundness (Le Chatelier's Method) | One Test | | 1 | 1 |
| | | Compressive Strength | One Test | | 1 | 1 |
| 2 | Coarse aggregate(40 mm down size) | SIEVE ANALYSIS | One Test | | 1 | 1 |
| | | Flakiness Index | One Test | | 1 | 1 |
| | | Elongation Index | One Test | | 1 | 1 |
| | | Specific Gravity | One Test | | 1 | 1 |
| | | Bulk Density(Loose) | One Test | | 1 | 1 |
| | | Bulk Density(Compacted) | One Test | | 1 | 1 |
| | | Water Absorption | One Test | | 1 | 1 |
| 3 | Coarse aggregate(20 mm down size) | SIEVE ANALYSIS | One Test | | 1 | 1 |
| | | Flakiness Index | One Test | | 1 | 1 |
| | | Elongation Index | One Test | | 1 | 1 |
| | | Specific Gravity | One Test | | 1 | 1 |
| | | Bulk Density(Loose) | One Test | | 1 | 1 |
| | | Bulk Density(Compacted) | One Test | | 1 | 1 |
| | | Water Absorption | One Test | | 1 | 1 |
| | | Aggregate crushing Value | One Test | | 1 | 1 |
| | | Aggregate Impact Value | One Test | | 1 | 1 |
| 4 | Fine aggregate | SIEVE ANALYSIS | One Test | | 1 | 1 |
| | | Water Absorption | One Test | | 1 | 1 |
| | | Specific Gravity | One Test | | 1 | 1 |
| | | Material finer than 75 micron | One Test | | 1 | 1 |
| 5 | PCC(M15) | Compressive Strength(7days and 28days) | 1 set /1-5 cum | | 2 | 2 |
| 6 | PCC(M20) | Compressive Strength(7days and 28days) | 1 set /1-5 cum | | 2 | 2 |
| 7 | M.S Block Pipe | Yeild Stress | One Test | | 1 | 1 |
| | | Tensile Strength | One Test | | 1 | 1 |
| | | Elongation Percentage | One Test | | 1 | 1 |
| 8 | Structural Steel | Weight/Meter | One Test | | 1 | 1 |
| | | Yeild stress | One Test | | 1 | 1 |
| | | Tensile Strength | One Test | | 1 | 1 |
| | | Elongation Percentage | One Test | | 1 | 1 |
| | | Bend Test | One Test | | 1 | 1 |

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## TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

**Lab ID** : **CP-2022-01-19-28** **Date: 22-07-21**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP,

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 19-07-21

**Sample Type** : Birla Super 53grade

**Reference to BIS codes** : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4 4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6

**Date of test** : 20-07-21

**Environmental Conditions during test** : Temperature: 26°C
Humidity: 72%

| Sl.No. | Physical properties | Results | Requirement as per IS 12269: 2013 |
|---|---|---|---|
| 1 | Fineness by dry sieving (%) | 2.15 | – |
| 2 | Finess by Air permeablity method ($m^2$/kg,Min) | 285.5 | 225$m^2$/kg, Min |
| 3 | Density (gm/cc) | 3.13 | – |
| 4 | Standard Consistency (%) | 27.0% | Not specified |
| 5 | Initial Setting time | 165 minutes | Not less than 30 minutes |
| 6 | Final Setting time | 255 minutes | Not more than 600 minutes |
| 7 | Soundness (Le Chatelier's Method) | 2.0mm | Not more than 10 mm |

* The results obtained are satisfactory as per standard requirements.

**Note:**

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All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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**R RUDRAPRASAD**
Authorized Signatory
**Technical Manager**

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Format No: CP/TF/01

## TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2022-01-19-28** **Date: 17-08-21** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Address** | : | Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11. |
| **Agency** | : | H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97 |
| **Customer's Reference** | : | BBMP/EE/BTP/WO/247/2016-17 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 19-07-21 |
| **Sample Type** | : | Birla Super 53grade |
| **Reference to BIS codes** | : | IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,<br>IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5<br>IS 4031 Part 6, Determination of Compressive Strength, Clause 6 |
| **Date of test** | : | 20-07-21 |
| **Environmental Conditions during test** | : | Temperature: 26°C<br>Humidity: 72% |

**Compressive Strength**

| Sl.No. | Physical properties | Results | Requirement as per IS 12269: 2013 |
|---|---|---|---|
| 1 | 3 Days | 29.5N/mm$^2$ | Not less than 27 N/mm$^2$ |
| 2 | 7 Days | 39.5N/mm$^1$ | Not less than 37 N/mm$^2$ |
| 3 | 28 Days | 56.5N/mm$^2$ | Not less than 53 N/mm$^2$ |

* The results obtained are satisfactory as per standard requirements.

**Note:**

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All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

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**FOR CIVIL Pro.**

CIVIL Pro Sl Date BANGALORE

**R RUDRAPRASAD**
Authorized Signatory
**Technical Manager**


****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com
HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
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## TEST REPORT ON COARSE AGGREGATES

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2022-01-19-28** **Date: 21-07-21** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Address** | : | Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11. |
| **Agency** | : | H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97 |
| **Customer Reference** | : | BBMP/EE/BTP/WO/247/2016-17 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 19-07-21 |
| **Sample Type/ Size** | : | 20mm down size coarse aggregate |
| **Reference to BIS codes** | : | IS: 383:2016 (Specification for Coarse and fine Aggregates )<br>IS: 2386 :1963(Part - 1,3,4) RA2011<br>IS 2386 Part 1: Particle Size and Shape<br>IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption<br>IS 2386 Part 4: Mechanical Properties |
| **Date of test** | : | 19-07-21 |

**SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:**

**Total weight taken : 5000 grams**

| Sample No. | Sieve No. | Weight Retained in gms | Cumulative Weight Retained in gms | % Cumulative Weight Retained | % Passing | Required as per IS 383:2016 |
|---|---|---|---|---|---|---|
| 1 | 40 mm | 0 | 0 | 0 | 100 | 100 |
| 2 | 20 mm | 243 | 243 | 4.9 | 95.1 | 90-100 |
| 3 | 10 mm | 2544 | 2787 | 55.7 | 44.3 | 25-55 |
| 4 | 4.75 mm | 1768 | 4555 | 91.1 | 8.9 | 0-10 |
| 5 | Pan | 445 | 5000 | 100 | 0 | – |

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Format No: CP/TF/01

## TEST REPORT ON COARSE AGGREGATES

**Lab ID** : **CP-2022-01-19-28** **Date: 21-07-21**

**PHYSICAL PROPERTIES**

| Sl.no | Tests | Result | Requirements as per IS:383-2016 |
|---|---|---|---|
| 1 | Flakiness Index(%) | 13.2 | Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate |
| 2 | Elongation Index(%) | 12.4 | |
| 3 | Specific Gravity | 2.65 | – |
| 4 | Bulk Density(Loose) (Kg/l) | 1.47 | – |
| 5 | Bulk Density(Compacted) (Kg/l) | 1.49 | – |
| 6 | Water Absorption(%) | 0.2 | – |
| 7 | Aggregate crushing Value(%) | 22.4 | Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface. |
| 8 | Aggregate Impact Value(%) | 21.8 | 30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface. |

* The results obtained are satisfactory as per standard requirements.

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**FOR CIVIL Pro.**

**R RUDRAPRASAD**
Authorized Signatory
**Technical Manager**



M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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## TEST REPORT ON COARSE AGGREGATES

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2022-01-19-28** **Date: 22-07-21** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Address** | : | Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11. |
| **Agency** | : | H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97 |
| **Customer's Reference** | : | BBMP/EE/BTP/WO/247/2016-17 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample condition** | : | Satisfactory |
| **Date of Receipt** | : | 19-07-21 |
| **Sample Type** | : | 40mm down size coarse aggregate |
| **Reference to BIS codes** | : | IS: 383:2016 (Specification for Coarse and fine Aggregates )<br>IS: 2386 :1963(Part - 1,3,4) RA2011<br>IS 2386 Part 1: Particle Size and Shape<br>IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption<br>IS 2386 Part 4: Mechanical Properties |
| **Date of test** | : | 19-07-21 |

**SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:**

**Total weight taken : 15000 grams**

| Sample No. | Sieve No. | Weight Retained in gms | Cumulative Weight Retained in gms | % Cumulative Weight Retained | % Passing | Required as per IS 383:2016 |
|---|---|---|---|---|---|---|
| 1 | 80 mm | 0 | 0 | 0.0 | 100 | 100 |
| 2 | 40 mm | 322 | 322 | 2.1 | 97.9 | 90-100 |
| 3 | 20 mm | 5643 | 5965 | 39.8 | 60.2 | 30-70 |
| 4 | 10 mm | 4663 | 10628 | 70.9 | 29.1 | 10-35 |
| 5 | 4.75 mm | 4025 | 14653 | 97.7 | 2.3 | 0-5 |
| 6 | Pan | 347 | 15000 | 100.0 | 0 | --- |

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# TEST REPORT OF FINE AGGREGATE

**Lab ID** : **CP-2022-01-19-28** **Date: 21-07-21**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

**Address** : Vidyaranyapura Sub Division, BBMP, Bangalore.

**Project Name** : Providing Senior citizen shelter, lighting to pathway and other development works to Ganesha layout park in M.S. Palya in ward no. 11.

**Agency** : H Gangadhar, #24, 3rd main road, Akshavanin layout, Vidyarnaypura, Bangalore - 97

**Customer's Reference** : BBMP/EE/BTP/WO/247/2016-17

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 19-07-21

**Sample Type** : Fine Aggregate

**Reference to BIS codes** : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids.Water Absorption

**Date of test** : 19-07-21

**Total weight taken** : 1000 grams

| Sl.no | Sieve Size | Weight Retained (gms) | Cumulative Weight Retained (gms) | % Cumulative Weight Retained | % Passing | Requirement as per IS 383:2016 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Grading Zone I | Grading Zone II | Grading Zone III | Grading Zone IV |
| 1 | 10 mm | 0 | 0 | 0.0 | 100.0 | 100 | 100 | 100 | 100 |
| 2 | 4.75 mm | 86 | 86 | 8.6 | 91.4 | 90-100 | 90-100 | 90-100 | 95-100 |
| 3 | 2.36 mm | 144 | 230 | 23.0 | 77.0 | 60-95 | 75-100 | 85-100 | 95-100 |
| 4 | 1.18 mm | 175 | 405 | 40.5 | 59.5 | 30-70 | 55-90 | 75-100 | 90-100 |
| 5 | 600 micron | 179 | 584 | 58.4 | 41.6 | 15-34 | 35-59 | 60-79 | 80-100 |
| 6 | 300 micron | 185 | 769 | 76.9 | 23.1 | 5-20 | 8-30 | 12-40 | 15-50 |
| 7 | 150 micron | 132 | 901 | 90.1 | 9.9 | 0-10 | 0-10 | 0-10 | 0-15 |
| 8 | Pan | 99 | 1000 | 100.0 | 0.0 | --- | --- | --- | --- |

**Result :The tested Sample Conforms to Grading Zone II**

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## TEST REPORT OF FINE AGGREGATE

**Lab ID** : **CP-2022-01-19-28** **Date: 21-07-21**

**PHYSICAL PROPERTIES**

| Sl.no | Tests | Result | Requirements as per IS 383:2016 |
|---|---|---|---|
| 1 | Water Absorption(%) | 1.75 | – |
| 2 | Specific Gravity | 2.56 | – |
| 3 | Material finer than 75 micron(%) | 4.9 | Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10% |

* The results obtained are satisfactory as per standard requirements.

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CIVIL Pro Sl. Date. BANGALORE

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Authorized Signatory
**Technical Manager**


****End of Report****

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M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com